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09/642,312	08/21/2000	William H. Thompson		8020

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Thomas B Ryan
Eugene Stephens & Associates
56 Windsor Street
Rochester, NY 14605

EXAMINER

NGUYEN, ALAN V

ART UNIT	PAPER NUMBER
	2662

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/642,312	THOMPSON, WILLIAM H.
Examiner	Art Unit	
Alan Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-29 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-29 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 21 August 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 30 October 2000 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Copies of the following references are needed: US 5722076, US 5736965, US 5835128, US 5903373, US 5903548, US 5937348

Specification

The disclosure is objected to because of the following informalities:

On page 2, line 4, "there be" should read --there would be--.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 12, 21, 23, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 15, 26, 44, and 59 of U.S. Patent No. 6,108,331.

Both claims 1, 12, 21, 23, and 25 of the instant application and claims 1, 15, 26, 44, and 59 of US 6,108,331 are directed to an in-house signal distribution system including a main input node taking an external signal and converting the external signal to addressed data packets and distributed to various access nodes with the house. The access nodes include a packet handler that picks packets addressed to the access node from the packet stream and converts the picked packets back to the original signal, and further sent to a respective distributing connector of the access node to the end-user device.

Claims 1, 15, 26, 44, and 59 of US 6,108,331 fails to specify a main input node having the capability to communicate to the access node, and the access node communicating to the end-user device through a wireless medium such as radio frequencies, with each node would having an attached wireless transceiver for transmitting and receiving signals, as specified in claims 1, 12, 21, 23, and 25 of the application.

Buckley (US 6,366,840) teaches the use of wireless communication interfaces connected to each other through a wireless medium. Buckley discloses in figure 1 a system for enabling wireless communication among a stand-alone computer, built-in vehicular display, and a trip computer.

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the patent's claimed invention by utilizing wireless communication among the main input node, access nodes, and end-user devices, as suggested by Buckley. The motivation is to obtain a more versatile system where physical wiring is not required among the nodes and where the user can move the device-around without the trouble of wiring. Installation of the system is also made easier.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-9, 12, 15, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (US 5,940,387) in view of Abraham (US 5,625,863) and in further view of Buckley (US 6,366,840).

Regarding claims 1, 12, 21, and 23, Humpleman discloses an in-house signal distribution system (**see figure 2**) including:

a main input node ("**network interface unit**", **figure 4, element 32**) mounted in a structure ("**network interface units 32 are located in a utility area of the house**", **column 4, lines 43-44**) and taking at least one external signal ("**permitting a connection between a different external network and the home network**", **column**

3, lines 23-24) and converting the at least one external signal to addressed data packets conveyed in a packet stream to at least one access node ("set-top electronics", figure 4, element 40), each access node having a unique node address ("the internal network is an Ethernet network", column 7, line 29; also column 11, lines 21-24 states that the access node examines the addresses of the data packets it receives and performs a routing function for data that is not meant for this node.);

each access node being an access port including a main module (figure 4, element 40)

a main module connector connected to the packet stream (figure 4, element 64);

at least one distributing connector connected to the main module ("the packet of data is transmitted from the network interface unit 32 to the set-top electronics 40" column 8, lines 6-8) and arranged for connection to at least one device that can receive respective ones of the at least one signal distributed by the in-house signal distribution network (figure 1, element 40 and 12);

a packet handler that picks packets addressed to the access node from the packet stream ("The set-top electronics examines the addresses of the data packets it receives and performs a routing function for data that is not meant for this node", column 11, lines 21-24); and

the packet handler converting the picked packets back to their respective ones of the at least one signal and sending the respective ones of the at least one signal to a

respective distributing connector of the access node (**column 8, lines 22-28 states that the data stream received by the set-top electronics is fed to the MPEG decoder, which decodes the data and provides it to the video decoder/encoder. The video decoder/encoder converts the signal to a format suitable for use by a display device, such as a television. The MPEG decoder and video decoder/encoder is shown in figure 4, elements 70 and 72, respectively**); and

a packet stream distributor (**figure 4, element 34**) carrying the packet stream from the main input node output port to each access node main module connector (**column 5, lines 3-8 states the internal network 34 as being interposed between the network interface units NIU and set-top electronics STE. It is further explained that the electronics of the NIU do not have to be duplicated for each STE**).

Humbleman, however, fails to expressly disclose the set-top electronics as being mounted in a wall of the structure.

Abraham teaches the use of mounting a distribution box on a wall for proximity to television sets (**see column 19, lines 41-45**) and to hide wiring (**see column 19, lines 55-57**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humbleman's apparatus to incorporate a setup where the set-top electronics is mounted to a wall, the motivation being that the set-top electronics will be more accessible for connection to the end-user devices and to be able to mask wiring behind walls.

Humbleman also fails to disclose the access node to include a transceiver in

wireless communication with at least one of the main input node and the at least one device.

Buckley teaches the use of wireless communication interfaces connected to each other through a wireless medium. Buckley discloses in figure 1 a system for enabling wireless communication among a stand-alone computer, built-in vehicular display, and a trip computer. He further teaches the use of Bluetooth as a method of wireless communication as stated on column 2, lines 13-16.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humpleman's apparatus to incorporate a setup where the set-top electronics is connected to the network interface unit and end-user device through a scheme of wireless communication, such as Bluetooth, the motivation being a more versatile system where physical wiring is not required among the nodes and where the user can move the device around the home without the hassle of wiring. Installation of the system is also made easier.

Regarding **claims 2, 3, and 6**, with the features in parent claim 1 addressed above, Humpleman, as modified, discloses the transceiver is a radio frequency transceiver (*"An available embodiment of a wireless communications medium is the Bluetooth technology"*, column 2, lines 14-15 of Buckley. **The wireless transceivers would be utilized by all three nodes: the network interface unit, the set-top electronics, and the end-user device**).

Regarding **claim 5**, with the features in parent claim 2 addressed above, Humpleman, as modified, discloses the transceiver in the access node is a distributing

connector and sends the picked packets to the at least one device (**column 8, lines 24-28 states that the data stream received by the set-top electronics is fed to the video encoder, where it is converted to a format suitable for use by a display device, such as a television. The encoder is shown in figure 4, element 72.**)

Regarding claim 7, with the features in parent claim 2 addressed above, Humpleman, as modified, discloses the access node further includes an antenna connected to the transceiver (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached**).

Regarding claim 8, with the features in parent claim 7 addressed above, Humpleman, as modified, discloses the antenna is embedded in a wall plate of the access node (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. The transceiver device is attached to the set-top electronics STE, therefore it must be embedded into the wall along with the STE**).

Regarding claim 9, with the features in parent claim 7 addressed above, Humpleman, as modified, discloses a distributing connector receives an antenna cable, thus allowing selective connection of an antenna to the main module (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached**).

Regarding claim 15, with the features in parent claim 12 addressed above, Humpleman, as modified discloses the main module includes an expansion connector into which a submodule (**figure 7, element 92a; column 11, lines 49-51 also states that an extra pair of wires is available to provide picture-in-picture capability for the television. This feature denotes the system has the feature to expand**) can

be inserted; and

the submodule (**figure 7, element 92a**) includes an antenna connector through which an antenna can communicate with the transceiver (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. As taught by Buckley, each transceiver would have an attached antenna**).

Regarding **claim 22**, with the features in parent claim 21 addressed above, Humpleman, as modified discloses the packet stream is generated by a main input node that takes at least one external signal ("**permitting a connection between a different external network and the home network**", **column 3, lines 23-24**) and converts the at least one external signal to addressed data packets carried by the packet stream to the access node ("**the internal network is an Ethernet network**", **column 7, line 29; also column 11, lines 21-24 states that the access node examines the addresses of the data packets it receives and performs a routing function for data that is not meant for this node.**"), the at least one external signal being at least one signal for distribution, the main input node including the another transceiver, the main module connector including the transceiver, and the packet stream including radio transmissions between the transceiver and the another transceiver ("**A wireless communications medium couples a first wireless communications interface to a second wireless interface and to a third wireless interface**", **column 2, lines 4-18 of Buckley. The wireless transceivers would be utilized by all three nodes: the network interface unit, the set-top electronics, and the end-user device**).

Regarding **claim 24**, with the features in parent claim 23 addressed above, Humpleman, as modified, discloses the connector is an antenna connector that communicates with the transceiver and protrudes through a wall plate mounted across an open end of the communications box (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. As taught by Buckley, each transceiver would have an attached antenna.**).

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (US 5,940,387) in view of Abraham (US 5,625,863) in further view of Buckley (US 6,366,840) and in further view of Lee et al (6,535,493), herein Lee.

Regarding **claim 4**, Humpleman, as modified, discloses the transceiver is a radio frequency transceiver.

Humpleman fails to disclose the transceiver uses the IEEE 802.11 standard.

Lee teaches on column 5, lines 7-12 about utilizing a network that conforms to the IEEE 802.11 standard.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humpleman's apparatus to incorporate transceivers utilized for the embodiment uses the IEEE 802.11 standard, the motivation being a more versatile system where physical wiring is not required among the nodes and where the user can move the device around the home without the hassle of wiring. Installation of the system is also made easier, as taught by Lee.

Claims 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (US 5,940,387) in view of Abraham (US 5,625,863) in further view of Buckley (US 6,366,840) and in further view of Taguci et al (6,163,532), herein Taguci.

Regarding **claim 25**, Humpleman, as modified, discloses A packet stream decoding access node ("*The selected program is provided by the network interface to the MPEG decoder*", **column 8, lines 22-24**) being an access port of an in-house digital network (**figure 2**) and including apparatus that receives addressed data packets from a packet stream carried by a packet stream distributor (**column 11, lines 21-24 states that the access node examines the addresses of the data packets it receives and performs a routing function for data that is not meant for this node**) and converts the addressed data packets into signals usable by devices connected to physical medium connectors of the access node (**column 8, lines 24-28 states that the data stream received by the set-top electronics is fed to the video encoder, where it is converted to a format suitable for use by a display device, such as a television**), the apparatus of the access node further including:

a main module connector (**Inherent; figure 4, element 64**) of the access node mounted on a main module of the access node (**figure 4, element 62**) and arranged to receive the packet stream from the packet stream distributor (**figure 4, element 60**);

a packet handling system connected to the main module connector that extracts from the packet stream data packets addressed to one of the access node ("*The set-*

top electronics examines the addresses of the data packets it receives and performs a routing function for data that is not meant for this node", column 11, lines 21-24) and a device connected to the access node, the packet handling system including a decoder that decodes the extracted data packets into a signal and sends the signal to a physical medium connector connected to the main module (**column 8, lines 22-28 states that the video decoder/encoder converts the signal to a format suitable for use by a display device, such as a television. The video decoder/encoder is shown in figure 4, element 72**);

a wireless connection between a transceiver on the main module and another transceiver external of the access node (**"A wireless communications medium couples a first wireless communications interface to a second wireless interface and to a third wireless interface", column 2, lines 4-18 of Buckley. The wireless transceivers would be utilized by all three nodes: the network interface unit, the set-top electronics, and the end-user device**); and

Humbleman fails to disclose the packet handling system sending an acknowledgment signal via the packet stream distributor when an addressed data packet has been successfully extracted from the packet stream.

Taguci teaches on column 2, lines 62-64 about acknowledgement signals (**If the packet address corresponding to the mobile data terminal equipment, the personal station transmits an acknowledgement signal"**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humbleman's apparatus to be able to send a signal

acknowledging successful reception of the packet stream, as suggested by Taguci.

The motivation is to obtain a more reliable system that can detect transmission errors or receiving errors.

Regarding **claim 26**, with the features in parent claim 25 addressed above, Humpleman, as modified, discloses the wireless connection includes the packet stream distributor, the transceiver is the main module connector, and the another transceiver is in a central node of the digital network (**"A wireless communications medium couples a first wireless communications interface to a second wireless interface and to a third wireless interface"**, column 2, lines 4-18 of Buckley. **The wireless transceivers would be utilized by all three nodes: the network interface unit, the set-top electronics, and the end-user device**).

Regarding **claim 27**, with the features in parent claim 25 addressed above, Humpleman, as modified, discloses the wireless connection includes extracted packets, the transceiver is a distributing connector, and the another transceiver is part of a device accessing the digital network via the wireless connection (**"A wireless communications medium couples a first wireless communications interface to a second wireless interface and to a third wireless interface"**, column 2, lines 4-18 of Buckley. **The wireless transceivers would be utilized by all three nodes: the network interface unit, the set-top electronics, and the end-user device**).

Regarding **claim 28**, with the features in parent claim 25 addressed above, Humpleman, as modified, discloses further including an antenna connected to the

transceiver and mounted in a wall plate of the access node (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. As taught by Buckley, each transceiver would have an attached antenna.**)

Regarding claim 29, with the features in parent claim 25 addressed above, Humpleman, as modified, discloses further including an antenna connector on the main module, the antenna connector itself being connected to the transceiver and providing selective communication between the transceiver and the antenna (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. As taught by Buckley, each transceiver would have an attached antenna.**)

Claims 10, 11; 13, 14, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (US 5,940,387) in view of Abraham (US 5,625,863), in further view of Buckley (US 6,366,840), and in further view of Buckley (US 6,032,089).

Regarding claims 10 and 11, Humpleman, as modified, discloses the transceiver is a wireless transceiver.

Humpleman fails to disclose a feature where the transceiver is an infrared transceiver.

Buckley teaches on column 2, lines 59-60 about using an infrared transceiver with IrDA protocol.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humpleman's apparatus to incorporate a setup where

the transceivers utilized for the embodiment work with an IrDA scheme, the motivation being a more versatile system where physical wiring is not required among the nodes and where the user can move the device around the home without the hassle of wiring. Installation of the system is also made easier.

Regarding claim 13, with the features in parent claim 11 addressed above, Humpleman, as modified, discloses the main module includes an expansion connector into which a submodule can be inserted (**figure 7, element 92a; column 11, lines 49-51 also states that an extra pair of wires is available to provide picture-in-picture capability for the television. This feature denotes the system has the feature to expand**); and

the distributing connector is on the submodule, and the distributing connector is the transceiver (**figure 7, element 92a**).

Regarding claim 14, with the features in parent claim 13 addressed above, Humpleman, as modified, discloses the transceiver includes an antenna connected to the submodule (**Buckley shows in figure 1, element 90 a transceiver device with an antenna attached. As taught by Buckley, each transceiver would have an attached antenna**).

Regarding claim 16, with the features in parent claim 11 addressed above, Humpleman, as modified, discloses the main module connector is the transceiver and the packet stream distributor includes radio transmissions between the transceiver and the another transceiver located in a central node of the in-house network.

Regarding claims 17 and 18, with the features in parent claim 11 addressed

above, Humpleman, as modified, discloses the transceiver is a radio frequency transceiver, and uses the Bluetooth standard (**"An available embodiment of a wireless communications medium is the Bluetooth technology", column 2, lines 14-15 of Buckley.**).

Regarding **claim 20**, with the features in parent claim 11 addressed above, Humpleman, as modified, discloses the transceiver is an IR transceiver (**Buckley discloses on column 2, lines 59-60 about using an infrared transceiver with IrDA protocol. The wireless transceivers would then be used by all three nodes: the network interface unit, the set-top electronics, and the end-user device.**).

Claims 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (US 5,940,387) in view of Abraham (US 5,625,863), in further view of Buckley (US 6,366,840), in further view of Buckley (US 6,032,089), and in further view of Lee et al (6,535,493), herein Lee.

Regarding **claim 19**, Humpleman, as modified, discloses the transceiver is a radio frequency transceiver.

Humpleman fails to disclose the transceiver uses the IEEE 802.11 standard.

Lee teaches on column 5, lines 7-12 about utilizing a network that conforms to the IEEE 802.11 standard.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Humpleman's apparatus to incorporate a setup where the transceivers utilized for the embodiment uses the IEEE 802.11 standard, the motivation

being a more versatile system where physical wiring is not required among the nodes and where the user can move the device around the home without the hassle of wiring. Installation of the system is also made easier, as taught by Lee.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to show the state of the art with respect to signal distribution

US Patent (5,526,034) to Hoarty et al

US Patent (5,684,799) to Bigham et al

US Patent (5,642,351) to Baran

The following patent is cited to show the state of the art with respect to wireless communications

US Patent (6,504,834) to Fifield

US Patent (6,285,757) to Carroll et al

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 703-305-0369. The examiner can normally be reached on 8am-5pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

AVN
November 21, 2003



RICKY NGO
PRIMARY EXAMINER